

IN THE CLAIMS

Claim 1 has been amended as follows:

1. (Currently Amended) A method for positioning a patient in a medical device having a treatment unit configured to receive a patient therein, a computer, and a patient bed, configured to receive a patient thereon, movable in at least one plane relative to said treatment unit, said method comprising the steps of:

prior to obtaining medical diagnostic data from the patient with said treatment

unit, acquiring, with an a non-invasive image-recording device, acquiring an empty image of the patient bed surface with no patient thereon, and acquiring an actual, non-invasive image of ~~an exterior~~ of the bed surface with the patient on the patient bed showing the bed surface and the exterior of the patient, and subtracting said empty image from said actual image to obtain a subtraction image showing only the exterior of the patient, and displaying said subtraction image on a display screen connected to said computer;

providing information to said computer identifying a spatial correlation between a coordinate system of the treatment unit and said image-recording device; and

an exterior by executing an image processing program in said computer, detecting ~~[[a]]~~ an exterior body region of the patient by analyzing said subtraction image to identify geometry of the exterior of the patient in the subtraction image and comparing the geometry to known and statistically determined proportions of exterior human anatomy and automatically, based on a result of executing said image processing

program, displaying a suggested scan area, from which to subsequently obtain said medical diagnostic data from the scan area using said treatment unit, in said subtraction image on said display screen that covers said body region.

2. (Previously Presented) A method as claimed in claim 1 comprising, in said image processing program, detecting two different body regions of the patient by analyzing said subtraction image and, for each of said different body regions, and automatically displaying a suggested scan area in said subtraction image on said display screen that covers that body region.

3. (Original). A method as claimed in claim 1 comprising optically emphasizing the detected body region on said display screen.

4. (Original). A method as claimed in claim 1 comprising manually entering a designation into said computer of said body region to be detected by said image processing program.

5. (Original). A method as claimed in claim 4 comprising entering said designation of said body region to be detected into said computer using a displayed menu.

6. (Original). A method as claimed in claim 4 comprising entering said designation of said body region to be detected into said computer by operating a keypad connected to said computer.

7. (Original). A method as claimed in claim 4 comprising allowing selection by a user of multiple body regions to be detected simultaneously.

8. (Original). A method as claimed in claim 1 comprising allowing manual alteration of the suggested scan area displayed on said display screen by said image processing program.

9. (Original). A method as claimed in claim 1 comprising designating said suggested scan area on said display screen with two lines respectively disposed at edges of said suggested scan area.

10. (Original). A method as claimed in claim 9 comprising designating said suggested scan area on said display screen with two parallel lines at the respective edges of the suggested scan area.

Claim 11 has been amended as follows:

11. (Currently Amended). A method as claimed in claim 1 wherein said non-invasive image-recording device is a first non-invasive image-recording device and wherein said empty image is a first empty image, and said actual, non-invasive image is a first, non-invasive actual image, and said subtraction image is a first subtraction image, and comprising the additional steps of:

prior to obtaining medical diagnostic data from the patient with said treatment unit, acquiring a second empty image of the patient bed surface with no patient thereon and acquiring a second actual, non-invasive image of the bed surface with the patient on the patient bed with a second non-invasive image-recording device showing the bed surface and the exterior of the patient, having from a recording axis that is independent of a recording axis of said first non-invasive image-recording device, and subtracting said second empty image from said second actual image to obtain a second subtraction image showing only the exterior

of the patient, and also displaying said second subtraction image on said computer;

providing information to said computer identifying a spatial correlation between the coordinate system of the treatment unit and said second image-recording device; and

with said image processing program in said computer, displaying said suggested scan area in each of said first and second subtraction images.

Claim 12 has been amended as follows:

12. (Currently Amended). A method as claimed in claim 11 comprising disposing said first and second non-invasive image-recording devices relative to each other with the respective recording axes thereof being orthogonal to each other.

Claim 13 has been amended as follows:

13. (Currently Amended). A method as claimed in claim 11 wherein said patient bed is movable in a plurality of movement planes relative to said treatment unit, and comprising the additional steps of:

for each movement plane, acquiring said first and second actual images the patient on the patient bed in that movement plane;

providing information to said computer identifying a spatial correlation in that movement plane between the coordinate system of the treatment unit and each of said first and second non-invasive image-recording devices; and

with said image processing program displaying said suggested scan area in each of said subtraction images on said display screen.

Claim 14 has been amended as follows:

14. (Currently Amended). An arrangement for positioning a patient in a medical device having a treatment unit adapted to receive a patient therein, and a patient bed, having a bed surface configured to receive a patient thereon, movable in at least one plane relative to said treatment unit, said arrangement comprising:

a computer;

an a non-invasive image-recording device that acquires an empty image of the patient bed with no patient thereon prior to obtaining medical diagnostic data from the patient with said treatment unit, and ~~for acquiring that acquires~~, also showing only the exterior of the patient, an actual, non-invasive image of the patient bed and ~~an exterior of the patient on the patient bed~~ showing the bed surface and the exterior of the patient, and that subtracts said empty image from said actual image to obtain a subtraction image showing only the exterior of the patient, and that displays said subtraction image on a display screen connected to said computer;

said computer containing information identifying a spatial correlation between a coordinate system of the treatment unit and said image-recording device; and

wherein said computer ~~detects a~~ detecting an exterior body region of the patient by analyzing said image to identify exterior geometry of the patient in the subtraction image and comparing the geometry to known

and statistically determined proportions of exterior human anatomy and said computer, based on a result of executing said image processing program, automatically displays displaying a suggested scan area in said subtraction image on said display screen that covers said body region, from which to subsequently obtain said medical diagnostic data from the scan area using said treatment unit.

15. (Previously Presented) An arrangement as claimed in claim 14 wherein said computer detects two different body regions of the patient by analyzing said image and, for each of said different body regions, automatically displays a suggested scan area in said subtraction image on said display screen that covers that body region.

16. (Original). An arrangement as claimed in claim 14 wherein said computer optically emphasizes the detected body region on said display screen.

17. (Original). An arrangement as claimed in claim 14 comprising an input unit allowing manual entry of a designation into said computer of said body region to be detected by said computer.

18. (Original). An arrangement as claimed in claim 17 wherein said input unit is a displayed menu.

19. (Original). An arrangement as claimed in claim 17 wherein said input unit is a keypad connected to said computer.

20. (Original). An arrangement as claimed in claim 17 wherein said input unit allows selection by a user of multiple body regions to be detected simultaneously.

21. (Original). An arrangement as claimed in claim 14 comprising an input unit allowing manual alteration of the suggested scan area displayed on said display screen by said computer.

22. (Original). An arrangement as claimed in claim 14 wherein said computer designates said suggested scan area on said display screen with two lines respectively disposed at edges of said suggested scan area.

23. (Original). An arrangement as claimed in claim 22 wherein said computer designates said suggested scan area on said display screen with two parallel lines at the respective edges of the suggested scan area.

Claim 24 has been amended as follows:

24. (Currently Amended) An arrangement as claimed in claim 14 wherein said non-invasive image-recording device is a first non-invasive image-recording device and wherein said actual, non-invasive image is a first actual, non-invasive image, and ~~said actual image is a first actual image~~, and said subtraction image is a first subtraction image, and comprising:

a second non-invasive image recording device ~~which that~~ acquires, prior to obtaining medical diagnostic data from the patient with said treatment unit, a second empty image of the patient bed surface with no patient thereon, and ~~which that~~ acquires, also prior to obtaining medical diagnostic data from the patient with said treatment unit, a second actual, non-invasive image of the bed surface with the patient on the patient bed showing the bed surface and the exterior of the patient, said second non-invasive image recording device having a recording axis that is independent of a recording axis of said first non-invasive

image-recording device, and ~~which subtracts~~ said computer subtracting said second empty image from said second actual image to obtain a second subtraction image, and ~~which also displays~~ causing said second subtraction image to be displayed on said display screen connected to said computer;

~~wherein~~ said computer ~~contains~~ containing information identifying a spatial correlation between the coordinate system of the treatment unit and said second non-invasive image-recording device; and
~~wherein~~ said computer displays causing said suggested scan area to be displayed in each of said first and second subtraction images.

Claim 25 has been amended as follows:

25. (Currently Amended) An arrangement as claimed in claim 24 wherein said first and second non-invasive image-recording devices are disposed relative to each other with the respective recording axes thereof being orthogonal to each other.

Claim 26 has been amended as follows:

26. (Currently Amended) An arrangement as claimed in claim 24 wherein said patient bed is movable in a plurality of movement planes relative to said treatment unit, and comprising the additional steps of:

for each movement plane, said first and second non-invasive image recording devices respectively acquiring said first and second actual, non-invasive images with the patient on the patient bed in that movement plane;

and wherein said computer ~~contains~~ containing information identifying a spatial correlation in that movement plane between the coordinate system of the treatment unit and each of said first and second non-invasive image-recording devices; and wherein said computer displays said suggested scan area to be displayed in each of said subtraction images on said display screen.